

## TIMBER BRIDGES.

## TO THE EDITOR.

SIR,—Having seen, in the fifth number of your journal, an article upon Timber Bridges, and an invitation to correspondents to submit for publication descriptions of, or remarks upon, timber bridges, under such circumstances I beg to lay before you the enclosed sketch of the Malahide Estuary Bridge (upon the Dublin and Drogheda Railway), now completed according to the design and under the superintendence of John McNeill, Esq., engineer in chief to the company, and executed by Mr. William McCormick, their contractor for lots No. 1, 3, 6, and 7 of the railway works. This noble piece of work, unrivalled in the annals of modern timber bridges, was commenced in the month of March, 1842, and completed in March, 1843. Its entire length is 534 feet, comprising 11 bays, each 48 feet span (between main piles), 28 feet wide, and 20 feet high (from strand to level of rails). It stands in the centre of an embankment 1200 yards long, which carries the railway across the channel and estuary of Malahide, and where ordinary spring tides are 12 feet high. The abutments at each end of the bridge, as shown on the drawing, are built upon piles driven into the strand 13 inches square, well shod, and driven by

an iron ram 800 lbs. weight from a fall of fifteen feet, until at each blow they could not be driven more than half an inch, after which the piles were cut, and waling pieces bolted thereto. A second row of sheeting piles, 3 inches thick and 9 inches wide, were driven with the joints or edges tongued into each other, and united by strong bolts to the longitudinal or waling pieces; over those main and sheeting piles were placed large horizontal sleepers, bolted down and filled in between with strong sharp concrete levelled to the top, and the entire upper surface sheeted or floored over with wrought and jointed elm planking, 4 inches thick, spiked down. The superstructure of the abutments being thus forwarded, the masonry commenced, and consisted of large even bedded stones laid in hydraulic mortar, being 12 feet 6 inches thick at bottom, and 10 feet at top, faced with rock-faced Ashlar work, with chamfered joints, and backed with good rubble masonry and three counterforts to each abutment; the wing walls, as shown on drawing, are also built with rock-faced Ashlar to a batter of 1 in 9, and coped with chiselled lime-stone, forming a very neat finish. The entire bridge is trussed and bound together in the strongest manner, and the balustrade forms a combination of taste and strength of

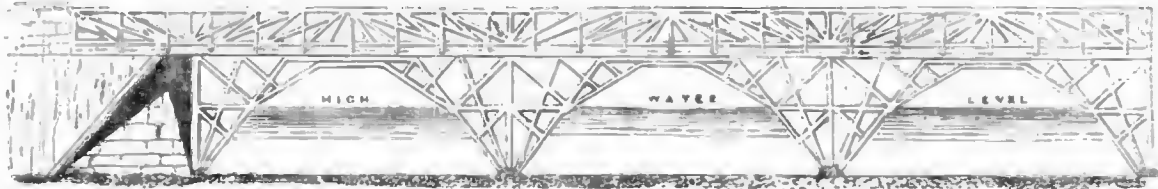
construction seldom to be rivalled in bridge joinery. The entire quantity of timber of the best description contained in the bridge is fifteen thousand cubic feet, and is bound and secured by wrought and cast-iron sockets, straps, tension-bars, bolts, &c., amounting in weight to about one hundred and fifty tons. I have often within the last three months stood upon the bridge when a locomotive engine with eighteen waggons of earth and stone have passed over it (to form the remainder of the embankment), and consider the vibration very little more than that of an ordinary stone bridge of one quarter its magnitude. The wood-work over the level of the strand is painted white, and is seen at a great distance from sea on the one side, and land on the other. Its perspective from the S.E. is very imposing, as the bays form a kind of interconnection of skeleton arches or ribs similar to the open timbers in a Gothic hall of older time. By giving the within a space in your journal,

You will oblige, Sir, your obedient servant.

JOHN KELLY, Architect.

44, Upper Gloucester-street.

Dublin, July, 1843.



Scale 25 feet to an Inch

Three of the eleven Arches of the Great Timber Bridge, or Malahide Estuary Viaduct, on the Line of the Dublin and Drogheda Railway.

## ON THE APPROPRIATE DISPOSAL OF MONUMENTAL SCULPTURE.

THE following letter, addressed by Mr. Westmacott, A.R.A., to the Rev. H. Milman, Prebendary of Westminster, appeared in the *Athenæum* of Saturday last, and will be found well worthy of perusal. We shall on a future occasion make it the subject of consideration.

## TO THE REV. H. MILMAN.

AS I hear it is in contemplation to make some changes in the disposition of the monuments now in Westminster Abbey, and that sites are to be found for others that are likely to be placed in that church, I avail myself of the opportunity thus afforded me to address to you a few observations on a subject that has long engaged my attention, and upon which I already have had conversations with yourself and others who feel an equal interest in such matters; namely, on the appropriate treatment, technically speaking, and disposal of monumental and ecclesiastical sculpture. I am the more strongly tempted to put forth my views at the present moment by the growing disposition that is evinced to give art, generally, more consideration than hitherto it has received in this country, and especially by seeing how much attention is now bestowed on ecclesiastical architecture and decoration. I venture to think, therefore, that the remarks I am about to make may not be thought altogether undeserving of the attention of those in whose hands is the power of giving effect to such suggestions as may appear of any value, and of remedying one of the greatest abuses, in its way, which long continued carelessness has caused, and still suffers to exist.

Westminster Abbey and St. Paul's Cathedral, from the importance derived from their scale and character as the great metropolitan churches, have been considered the fit depositories of almost all the public memorials that have been erected in this country to departed eminence or worth. Perhaps no single church in the world contains monuments of greater interest than are to be found in the former; and its character in this respect is so generally recognized on the continent, that I well remember on being taken into the church of Santa Croce at Florence, the Italian friend who accompanied me thither exclaimed, pointing to the monuments of Galileo, Michael Angelo, Machiavelli, and others of his distinguished countrymen,—"Ecco il nostro Westminster Abbey."—This reputation of the cemetery of our kings, statesmen, poets, and heroes, is not undeserved; but standing, as I truly believe it does, pre-eminent for the interest which attaches to it for its public monuments, it may as truly be said, that it is quite as remarkable for the inappropriate and even objectionable style of the greater proportion of the works, particularly those of comparatively modern date, which

its guardians have allowed to be placed in it. In making this reflection, I do not mean to allude to the style of art exhibited in the various works referred to, which may be simply characteristic of a period; nor to the quality or merit of the workmanship, with which the present question has nothing to do; but it does apply most forcibly to the feeling, the sentiment, which pervades many of the designs, and which renders them as unfit for their situation as they are foreign to the purpose for which such works originally were intended.

Two classes of monumental design have been required in memory of the dead. One, of a personal and commemorative character, and having reference to worldly honour and achievements, and therefore illustrating the importance of the individual; the other, intended to be simple records of the dead, the reminders, not of the glory and honours of a transitory life, and of this world, but of that change to which all are doomed—of that change in which the tenant of the most gorgeous tomb, however "high, and mighty, and puissant" he may have been in his lifetime, must be viewed as only equal with even the least distinguished of his fellow men, and who, instead of being pointed at as an example of greatness, can only help to give greater force to the simple lesson which the dead may teach the living. I am anxious to mark strongly the distinction that exists between the two classes of monuments; and, without meaning in any way to interfere with the erection of works that, doing just honour to great deeds, may incite others to deserve equal acknowledgment from their country. To insist upon the importance of the classification; and, by so doing, to endeavour to pave the way for a more appropriate destination of the respective works.

A great error has, it appears to me, been committed in allowing monuments of the two kinds, and erected for such entirely different objects, to be placed in a common receptacle—more especially in our churches—in depositing thus, in close juxtaposition, the proud boasting illustration of heroic or warlike achievement, and the simple and unostentatious tomb of humble piety—one put forth as the incitement to strain to earthly distinction, the other placed there as the impressive record that "greatness is departed," and that "unto dust must we return." It is to this point then, especially, I wish to call your attention, with the hope of procuring your support and co-operation in persuading so important and influential a body as that of which you are a member, to give at once its sanction, by the steps it has the power to take in Westminster Abbey, to a more correct and a more decorous regulation.

It is well known to all who have studied the history and character of ecclesiastical sculpture, that in the earlier times monumental art was peculiarly distinguished for its quiet, unpretending, and, if it may be so said, religious sentiment. Even the most wealthy and the most dignified personages,

whether sovereigns, warriors, or ecclesiastics, were represented simply extended, on the lid of their stone tomb. When accessories were added, they appear as angels, supporting the pillow under the head of the deceased, or kneeling in prayer, or watching at his feet. In some monuments are found also figures of saints, or ecclesiastics, or even of members of the family to which the deceased belonged, placed in niches in the pedestal, or around the tomb on which the body is lying; but they usually are in attitudes of prayer or penitence. Sometimes the wall against which the tomb stands is decorated with paintings, or the niche which receives it, or the canopy over it, are enriched with relief, illustrating some scripture or religious story; subjects which afford a wide and attractive field to the artist for the display of deep feeling, fine composition, and every other high quality of art. There certainly are occasional exceptions to this rule among the older works, but it seldom happens, till a later period, when perhaps the fervour of truly religious feeling was grown cold—that subjects are introduced having an exclusive reference to this world and the deeds of this life. It is not necessary to dwell upon this fact. An examination of monuments of the kind alluded to—the earliest of which, in this country, date from the eleventh century—will satisfy the observer of the truth of the remark; and a comparison of these with the style of monument of the sixteenth century, and extending down to our own time, will sufficiently and, I may be permitted to say, painfully, illustrate the change of sentiment that had crept in, when ingenuity, finery, fancy, and mechanical skill, were substituted for earnestness of feeling and simplicity of design.

It does not become me to presume to lay down any rules for the treatment of monumental sculpture; but I am desirous to answer some objections that have been offered to returning to the more simple style of design. It has been said that if this should become general all monuments would be alike; that they would be tame copies of each other; that there would be no room for the display of skill, or the exercise of imagination; and finally that monumental art would be so mechanical that it would cease to have any effect on the spectator. But it must not be supposed, that in carrying out the principle of simplicity and singleness of feeling in monuments of this class, sculptors would necessarily be limited to one type. It is not necessary to recur to the monuments of the thirteenth and fourteenth centuries, as the models that are to be implicitly followed. It is quite natural that when sculpture was first used in monuments, and art in its infancy, the most simple forms should have been adopted; and these were shown in the effigy of the person commemorated lying on his tomb. This, therefore, was the type generally employed, and it continued to be used, prescriptively as it were, for a long period. But the unqualified adoption of